

C L A I M S

Process for producing a sheetlike form comprising at least one single-layer matrix for the controlled release of active substances to the vicinity of the application site, the substances being selected from crop protectants, herbicides, biocides, fertilizers, plant strengtheners, active principles and fragrances, characterized in that the matrix is produced using at least two layers (1, 2), identical in composition, of a base material in the following temporally and spatially defined steps:

- a) provision of two prefabricable layers (1, 2) identical in composition, of a base material;
- b) application of active substance to a surface of the two layers (1,2),
- c) placement of the two layers (1,2) at their active substance surfaces so as to enclose the active substance between them, irreversible joining under pressure to form a laminate,
- d) storage of the laminate for predetermined duration under defined conditions, with diffusion of the active substance into the base material and connection at their interfaces to form a homogenous matrix featuring substantial controlled dispensation of active substance.

Process according to Claim 1, characterized in that volumetric metering of the active substance is performed by admitting it at a pressure

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3. Process according to Claim 1 or 2, characterized in that the joining of the base material layers (1, 2) is performed under a laminating pressure of between 2 and 10 bar, preferably between 3 and 5 bar.
4. Process according to one or more of Claims 1 to 3, characterized in that the storage of the active substance matrix (14) is performed at a temperature of between 15 and 30°C, preferably between 20-24°C, with a duration of at least 48 hours.
5. Process according to one or more of Claims 1 to 4, characterized in that active substance is applied in the form of a flowable medium having a viscosity of at least 1000 mPa.s.
6. Process according to Claim 5, characterized in that active substance medium is applied with a fraction of auxiliaries.
7. Process according to one or more of Claims 1 to 6, characterized in that the application of active substance is performed continuously or intermittently.
8. Process according to one or more of Claims 1 to 7, characterized in that the active substance matrix (14) is made self-adhesive.
9. Process according to one or more of Claims 1 to 8, characterized in that volatile or thermally labile active substances are incorporated between the base material layers (1, 2) of the matrix.
10. Process according to one or more of Claims 1 to 9, characterized in that at least one polymer from one of

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the following groups is selected as the matrix base material: ethylene-vinyl acetate copolymer, block copolymer, e.g. styrene/butadiene/styrene or styrene/isoprene/styrene, polyisobutylene, polyacrylates, polymethacrylates, polyvinyl esters, polyamide, polyesters, cellulose derivatives and silicones.

11. Process according to one or more of Claims 1 to 10, characterized in that an active substance medium is used which comprises tackifying substances.
12. Process according to one or more of Claims 1 to 11, characterized in that an active substance is used which is a mixture of Z,E-9,12-tetradecadienol and Z,E-9,12-tetradecadien-1-yl acetate.
13. Process according to one or more of Claims 1 to 12, characterized in that the matrix layers comprise one or more active substances.
14. Process according to one or more of Claims 1 to 13, characterized in that at least one of the active substances dimethoate, imidacloprid, fenpropidine, acephate and acetamiprid is incorporated into the matrix.
15. Process according to one or more of Claims 1 to 14, characterized in that the active substance medium is applied in regular or irregular areal distribution onto at least one of the matrix layers (1, 2), including its application, for example, in the form of patterns or stripes.

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A B S T R A C T

A process for producing a sheetlike formulation comprising at least one single-layer active substance matrix for the controlled release of active substance to the vicinity of the application site, the active substances being selected from crop protection agents, biocides, fertilizers, plant strengtheners, cosmetic active principles and fragrances, is characterized in that the matrix is produced using at least two layers (1, 2), identical in composition, of a base material in the following temporally and spatially separate steps:

- e) provision of two prefabricable layers (1,2), identical in composition, of a base material,
- f) application of active substance to at least one of the two layers (1,2),
- g) placement of the two layers (1,2) atop one another so as to enclose the active substance applied, and irreversible joining under pressure to form a laminate,
- h) storage of the laminate for predeterminable duration under defined conditions, with migration of the active substance into the base layers (1,2), and connection at their interfaces to form a homogenous matrix featuring substantially uniform dispensation of active substance.

(FIG.1)

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